



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,361	10/30/2003	Yoshisada Nakamura	Q78213	7587
23373	7590	06/19/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LEE, SUSAN SHUK YIN	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,361

Applicant(s)

NAKAMURA ET AL.

Examiner

Susan S. Lee

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-15, 17 is/are rejected.
- 7) ☒ Claim(s) 6, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (6,097,926) in view of Miyabayashi et al. (5,138,390) as shown by Kanesawa et al. (6,795,661).

Takagi et al. discloses a fixing device (heating and pressuring means shown in Fig. 65A - 388, 313) that fixes toner images on paper of sizes not limited to A4 vertical size and a post card size. Note column 28, lines 33-40. The fixing device has about a diameter of 50 mm (note column 35, lines 27-33. Thus, the fixing roller 388 has an outer diameter of 50 mm. This reveals that the perimeter of the fixing roller 388 is equal to $\pi \times \text{diameter}$, that is $\pi \times 50 \text{ mm}$ or $3.14 \times 50 \text{ mm} = 157 \text{ mm}$ or 15.7 cm.

Takagi et al. differs from the instant invention by not disclosing a cleaning sheet used to clean the heating and pressuring means.

Miyabayashi et al. discloses using a cleaning sheet 11 used to clean the fixing roller and pressing roller of stains. The cleaning sheet 11 have a size of 220 mm x 300 mm or 220 mm x 220 mm (note column 6, lines 32-35). The sheet is also coated with

ethylene-vinyl acetate copolymer that is also thermoplastic resin. Note column 3, lines 30-68 and column 4, lines 1-9.

Kanesawa et al. discloses printing postcards and photographs of the size 89 mm x 127 mm. The fixing belt 64 used for fixing the postcards and photographs were 130, 180, 240, and 330 mm in width. Note column 14, lines 9-15 and lines 36-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Takagi et al. with that of Miyabayashi et al. so that the fixing device can be further cleaned of stains left behind after fixing toner images. Since the diameter of Takagi is about 15.7 cm, this difference between the cleaning sheet and the circumference of the fixing roller is $15.7\text{ cm} - 2.2\text{ cm} = 13.5\text{ cm}$ which reads on claims 3 and 15. Additional, since Takagi discloses printing on post cards, Kanesawa et al. shows it is well known in the art that post cards are of the size of 89 mm x 127 mm. This suggestion shows that a circumference of fixing roller of Takagi et al. (157 mm) is longer than either a width (89 mm) or a length of a post card (127 mm).

Claims 1, 3, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al. (2002/190060) in view of Miyabayashi et al. (5,138,390) as shown by Kanesawa et al. (6,795,661).

Imai et al. discloses a fixing belt 36 with a diameter of 50 mm and comprising an endless belt base of polyimide resin and a releasing layer of one of silicone rubber, fluorocarbon rubber, PTFE, PFA, and FEP. Note page 12, paragraph [0153]. Pressing

Art Unit: 2852

roller 2, fixing roller 37, and fixing belt 36 (note page 14, paragraph [0164]) read on the instant invention's heating and pressing means. A various types of sheets can be fixed by the fixing belt 36 such as JIS A4, A3 size, B5 size, and postcards. Note pages 1 and 2, paragraph [0010]. This reveals that the perimeter of the fixing belt is equal to $\pi \times$ diameter, that is $\pi \times 50 \text{ mm}$ or $3.14 \times 50 \text{ mm} = 157 \text{ mm}$ or 15.7 cm

Imai et al. differs from the instant invention by not disclosing using a cleaning sheet having a length greater than the fixing belt's perimeter and smaller than the smallest image receiving sheet.

Miyabayashi et al. discloses using a cleaning sheet 11 used to clean the fixing roller and pressing roller of stains. The cleaning sheet 11 has a size of $220 \text{ mm} \times 300 \text{ mm}$ $220 \text{ mm} \times 220 \text{ mm}$ (note column 6, lines 32-35). The sheet is also coated with ethylene-vinyl acetate copolymer that is also thermoplastic resin. Note column 3, lines 30-68 and column 4, lines 1-9.

Kanesawa et al. discloses printing postcards and photographs of the size $89 \text{ mm} \times 127 \text{ mm}$. The fixing belt 64 used for fixing the postcards and photographs were 130, 180, 240, and 330 mm in width. Note column 14, lines 9-15 and lines 36-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Imai et al. with that of Miyabayashi et al. so that the fixing device can be further cleaned of stains left behind after fixing toner images. Since the diameter of Imai et al. is about 50 mm, this difference between the cleaning sheet and the perimeter of the fixing roller is $15.7 \text{ cm} - 3.0 \text{ cm} = 13.5 \text{ cm}$ which reads on claims 3 and 15. Additional, since Imai et al. discloses printing on post cards,

Art Unit: 2852

Kanesawa et al. shows it is well known in the art that post cards are of the size of 89 mm x 127 mm. This suggestion shows that a perimeter of the fixing belt of Imai et al. (157 mm) is longer than either a width (89 mm) or a length of a post card (127 mm).

Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al., as modified by Miyabayashi et al. and shown by Kanesawa et al., as applied to claims 1, 3, and 11-15 above, and further in view of Chen et al. (2001/0021491).

Imai et al., as modified by Miyabayashi et al. as shown by Kanesawa et al., differ from the instant invention by not disclosing a cooling device.

Chen et al. discloses a blower 16 used to cool the fixing belt 14. Note column 6, paragraph [0052].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus and method of Imai, in view of Miyabayashi et al. as shown by Kanesawa et al., with that of Chen et al. so that the fixing belt can be cooled to prevent from overheating.

Claims 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al., as modified by Miyabayashi et al. and shown by Kanesawa et al., as applied to claims 1, 3, and 11-15 above, and further in view of Otsuka et al. (6,094,559).

Imai et al., as modified by Miyabayashi et al. as shown by Kanesawa et al., differ from the instant invention by not disclosing a size of the cleaning sheet is selected from the group consisting of L-size, A6-size, A4-size, B4-size, A3-size, B5-size, postcard-

Art Unit: 2852

size, and business card-size; a fixing temperature at which toner is fixed on an image-receiving sheet in the image forming apparatus differs from a temperature during cleaning at a portion of the image forming apparatus where fixing is conducted; and a transport speed during cleaning is different than the transport speed of toner fixing.

Otsuka et al. discloses an image forming apparatus with a cleaning mode for cleaning fixing member in which a sheet is pinched by the nip, and the sheet is conveyed in a direction by repeating rotation and stoppage of the rotatable fixing member. Note abstract. A cleaning sheet of size A4 is used. Note column 14, lines 24-25. The energization of a heating means of the fixing device is changed from ON to OFF in the cleaning mode (note column 27, lines 61-67). The rotatable fixing member is also stopped during cleaning mode, thus this reads on the instant invention's claim 10 where the transport speed during cleaning differs from the transport speed during fixing of toner images (note column 27, lines 61-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Imai et al., in view of Miyabayashi et al. as shown by Kanesawa et al., with that of Otsuka et al. so that sizes of the cleaning sheet do not differ from sizes of imaging sheets so that supply trays can be used for both cleaning sheet and imaging sheets and heating can be conserved for cleaning the fixing device to avoid overheating.

Allowable Subject Matter

Claims 6, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 4/13/06 have been fully considered but they are not persuasive.

Applicant argued that Takagi et al. on column 27, lines 57-58 shows a heating roller has a diameter of 43 mm and the pressure roller having a diameter of 40 mm. Column 27, lines 57-58 of Takagi does not disclose this. It is not clear what applicant is stating as an improper.

Kanesawa et al. is used because it shows that a postcard is in the size of 89mm x 127 mm. Kanesawa shows an explanation of what a size of a one type of postcard is. See MPEP 2131.01. It is not used to as a reference teaching to combine with Takagi. As to arguing that Kanesawa et al. do not show a standard size of postcards, In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a standard size of postcards) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

As to the arguments made to rejection made of Imai et al. as modified by Miyabayashi et al. as shown by Kanosawa et al., Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made.


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 571-272-2137. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119 or 571-272-2800 (Ext. 52). The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Susan S. Lee
Primary Examiner
Art Unit 2852